

## REMARKS

In the Office Action, claims 1 and 2 are rejected under 35 U.S.C. § 103 over U.S. Patent No. 6,414,262 ("Rao") and U.S. Patent No. 6,428,218 ("Mussig"). Applicants believe that this rejection is improper for at least the reasons set forth below.

Of the pending claims at issue, claim 1 is the sole independent claim. Claim 1 recites an optical fiber fusion splicer. The optical fiber fusion splicer includes a setting means for setting respective end surfaces of two optical fibers that are to be spliced against each other; a heating means for generating an arc discharge between two discharged electrodes and heating an abutment portion of the optical fibers using a discharge beam; an image pick up means for picking up an image of the discharge beam; and a control means for measuring, from the image signals obtained by the image pick up means when a preliminary arc discharge is generated between the discharge electrodes when no optical fibers have been placed in a discharge area, brightness distributions on a plurality of lines that are set at different positions along a rectilinear direction between the discharge electrodes and run in a direction substantially at right angles to the rectilinear direction thereby estimating a heating center from the number of brightness distributions and subsequently controlling the setting means such that the abutment portion of the two optical fibers is positioned in the heating center wherein thereafter the heating means is controlled such that a main arc discharge is generated and the abutment portion is heated by the discharge beam. As further defined in claim 2, the current during the preliminary arc discharge is smaller than the current during the main arc discharge.

Even if combinable, Applicants believe that the cited art is distinguishable from the claimed invention. For example, the primary Rao reference provides that the position of the heating center is determined based on the abutment portion of the optical fibers which were previously positioned on a heating position by irradiating a low power laser beam to the abutment portion and by monitoring the result of the irradiation using a photo-detector as described in column 3 at lines 34-40. Further, Rao effectively teaches away from the estimation of the heating center as claimed since the laser beam in Rao is very highly condensed to the abutment portion of the optical fibers compared with the arc discharge as claimed. Based on at least these reasons, Rao on its own is clearly distinguishable from the claimed invention.

With respect to the Mussig reference, Applicants do not believe that the Patent Office can rely solely on this reference even if properly combinable to remedy the deficiencies of Rao. At

the outset, an initial arc discharge in Mussig is performed in order to determine a discharge current in which the smallest loss during the splicing of the optical fibers can be achieved as described in column 3 at lines 53-60. Moreover, the current during the initial discharge in Mussig is not always smaller than the current during the primary arc discharge since the current during the initial arc discharge is dependent on the loss during the splicing of the optical fibers in contrast to the claimed invention as further defined in claim 2. Therefore, Applicants do not believe that one skilled in the art would be inclined to modify the cited art even if properly combinable to cover at least those features of the claimed invention as discussed above.

Based on at least these reasons, Applicants believe that the cited art fails to disclose or suggest the claimed invention. Therefore, Applicants respectfully submit that the cited art even if properly combinable fails to render obvious the claimed invention.

Accordingly, Applicants respectfully request that the obviousness rejection be withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY 

\_\_\_\_\_  
Thomas C. Basso  
Reg. No. 46,541  
P.O. Box 1135  
Chicago, Illinois 60690-1135  
Phone: (312) 807-4310

Dated: October 13, 2004